

IN THE CLAIMS:

Kindly replace claims 3-5 and 11 as follows:

3. (Amended) The perpendicular magnetic recording layer of claim 1, wherein, in the range of thickness of the perpendicular magnetic recording layer, the rate of variation of the ratio of perpendicular remanent magnetization of maximum perpendicular remanent magnetization is greater than of the ratio of perpendicular coercivity H_c to maximum perpendicular coercivity H_o .

4. (Amended) The perpendicular magnetic recording layer of claim 1, wherein, in the range of thickness of the perpendicular magnetic recording layer, a noise level constant of proportionality α expressed as the following formula decreases with reduced thickness of the perpendicular magnetic recording layer:

$$\alpha = \frac{4\pi Mr}{H_c}$$

where Mr is the perpendicular remanent magnetization and H_c is the perpendicular coercivity.

5. (Amended) The perpendicular magnetic recording disk of claim 1, wherein the perpendicular magnetic recording layer is formed of a CoCr alloy.

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11. (Amended) The perpendicular magnetic recording disk of claim 1, further comprising a protective layer and a lubricant layer sequentially on the perpendicular magnetic recording layer.

Kindly add claims 12-15 as follows:

12. (New) The perpendicular magnetic recording layer of claim 2, wherein, in the range of thickness of the perpendicular magnetic recording layer, the rate of variation of the ratio of perpendicular remanent magnetization of maximum perpendicular remanent magnetization is greater than of the ratio of perpendicular coercivity H_c to maximum perpendicular coercivity H_o .

13. (New) The perpendicular magnetic recording layer of claim 2, wherein, in the range of thickness of the perpendicular magnetic recording layer, a noise level constant of proportionality α expressed as the following formula decreases with reduced thickness of the perpendicular magnetic recording layer:

$$\alpha = \frac{4\pi Mr}{H_c}$$

where Mr is the perpendicular remanent magnetization and H_c is the perpendicular coercivity.

14. (New) The perpendicular magnetic recording disk of claim 2, wherein the perpendicular magnetic recording layer is formed of a CoCr alloy.